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IN THE
Supreme Court Of The United States

LUIS E. MELENDEZ-DIAZ,
Petitioner,

v.

MASSACHUSETTS,
Respondent.

On Writ of Certiorari
to the Appeals Court of Massachusetts

BRIEF OF *AMICUS CURIAE* THE NATIONAL INNOCENCE NETWORK IN SUPPORT OF PETITIONER

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INTEREST OF *AMICUS CURIAE* [1]

The Innocence Network (the Network) is an association of organizations dedicated to providing pro bono legal and/or investigative services to prisoners for whom evidence discovered post conviction can provide conclusive proof of innocence. The forty-five current members of the Network represent hundreds of prisoners with innocence claims in all 50 states and the District of Columbia, as well as Canada, the United Kingdom, and Australia.[2] The Innocence Network and its members

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[1] Pursuant to Rule 37, a letter of consent from each party accompanies this filing. Pursuant to Rule 36, *amicus* states that no counsel for a party authored this brief in whole or in part, and no person or entity, other than *amicus* and its counsel, made a monetary contribution to the preparation or submission of the brief.

[2] The member organizations include the Alaska Innocence Project, Arizona Justice Project, Association in the Defence of the Wrongly Convicted (Canada), California & Hawai'i Innocence Project, Center on Wrongful Convictions, Connecticut Innocence Project, Cooley Innocence Project (Michigan), Delaware Office of the Public Defender, Downstate Illinois Innocence Project, Georgia Innocence Project, Griffith University Innocence Project (Australia), Idaho Innocence Project (Idaho, Montana, Eastern Washington), Indiana University School of Law Wrongful Convictions Component, Innocence Network UK, The Innocence Project, Innocence Project Arkansas, Innocence Project New Orleans (Louisiana and Mississippi), Innocence Project New Zealand, Innocence Project Northwest Clinic (Washington), Innocence Project of Florida, Innocence Project of Iowa, Innocence Project of Minnesota, Innocence Project of Texas, Kentucky Innocence Project, Maryland Office of the Public Defender, Medill Innocence Project (all states), Mid-Atlantic Innocence Project (Washington, D.C., Maryland, Virginia), Midwestern Innocence Project (Missouri, Kansas, Iowa), Mississippi Innocence Project,

are also dedicated to improving the accuracy and reliability of the criminal justice system in future cases. Drawing on the lessons from cases in which the system convicted innocent persons, the Network advocates study and reform designed to enhance the truth-seeking functions of the criminal justice system to ensure that future wrongful convictions are prevented. The Network pioneered the post-conviction DNA model that has to date exonerated over 200 innocent persons, and has served as counsel in the majority of these cases. As perhaps the Nation's leading authority on wrongful convictions, the Network and its founders, Barry Scheck and Peter Neufeld (both of whom are members of New York State's Commission on Forensic Science, charged with regulating state and local crime laboratories) are regularly consulted by officials at the state, local and federal levels.

In over half of the more than 200 exonerations by the Innocence Network, the misapplication of forensic disciplines—such as blood type testing, hair analysis, fingerprint analysis, bite mark analysis, and more—has played a role in convicting the

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Nebraska Innocence Project, New England Innocence Project (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont), North Carolina Center on Actual Innocence, Northern Arizona Justice Project, Northern California Innocence Project, Ohio Innocence Project, Pace Post Conviction Project (New York), Rocky Mountain Innocence Project, Schuster Institute for Investigative Journalism at Brandeis University - Justice Brandeis Innocence Project (Massachusetts), Texas Center for Actual Innocence, Texas Innocence Network, The Reinvestigation Project of the NY Office of the Appellate Defender, University of British Columbia Law Innocence Project (Canada), University of Leeds Innocence Project (Great Britain), and the Wisconsin Innocence Project.

innocent. In these cases, forensic criminalists presented fraudulent, exaggerated, or otherwise tainted evidence to the judge or jury which led to the wrongful conviction. *See, e.g., Innocence Project, Factors on Post-Conviction DNA Exonerations*, at http://innocenceproject.org/Content/351.php. This work has given *Amicus* a particularly strong interest in ensuring that criminal convictions are premised upon accurate forensic work -- an interest directly implicated by the constitutional question before the Court: whether a state forensic analyst's laboratory report prepared for use in a criminal prosecution is "testimonial" evidence subject to the demands of the Confrontation Clause as set forth in *Crawford v. Washington*, 541 U.S. 36 (2004).

SUMMARY OF ARGUMENT

A. The Myth of Infallible Forensic Evidence

Over the past 35 years, a belief has taken hold in the criminal justice system that critical elements of any given case can be conclusively and irrefutably resolved through the use of forensic evidence. This belief stems from the assumption that state forensic examiners are highly-trained scientists, who conduct widely-recognized tests, and can then provide an objective and unimpeachable report about their results for use in criminal trials. The supposedly objective and "neutral" nature of these reports render the need for direct testimony and cross-examination superfluous.

The Supreme Judicial Court of Massachusetts neatly captured this belief in its opinion rejecting a Confrontation Clause attack on the introduction of a chemical report of a forensic examiner into evidence over defense objection:

> Certificates of chemical analysis are neither discretionary nor based on opinion; rather, they merely state the results of a well-recognized scientific test. . . .

Commonwealth v. Verde, reprinted at Appendix C to the Petitioner's Appendix to the Petition for Certiorari, at 17a.

Such a belief, however, rests entirely on a myth of infallibility -- a myth that finds no basis in the reality of state forensic practices throughout the country. In many cases, forensic examiners have little or no scientific background but are merely state law enforcement employees. To make matters worse, states like Massachusetts provide an easy means for unqualified examiners to escape detection by permitting judicial notice of an examiner's credentials without any demonstrated basis for doing so.[3]

Nor is there any merit to the notion relied on by the court below -- that forensic examiner reports and testimony should be exempt from confrontation because the examiners are doing nothing more than "stating" the objective results of "well-recognized" scientific tests. In reality, state forensic examiners do exercise substantial discretion and judgment regardless of the nature of the technique, and these examiners also often interpret the results of

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[3] Mass. Gen. Laws ch. 111, § 13 (when analyst certificate provided by statute is properly executed, "the court shall take judicial notice of the signature of the analyst or assistant analyst, and of the fact that he is such.")

unverified techniques for which there often exists no recognized or objective standard at all. In fact, many laboratories, including the one that performed the testing in this case, are not even accredited, Pet. Op. Br. at 27, and there is no governing body that oversees the quality of their work on any regular basis. Nor is accreditation a guarantee of reliable results. Many of the errors discussed in this brief occurred in accredited labs.

Undoubtedly, there are many cases in which qualified forensic examiners are careful and conservative in their work, exercise appropriate professional discretion and judgment, and thus provide sound and helpful scientific opinions. Unfortunately, however, there are also many documented cases in which state forensic examiners have relied on unscientific methods and procedures, have made mistakes in recording or reporting any results, have evinced bias in favor of the prosecution by overstating the probative value of test results, and have even fabricated test results entirely. In short, there is simply no basis to the idea that, as a result of the "scientific" label that the State places upon the opinion of the state examiner, forensic testimony is somehow "neutral" or ministerial and therefore unimpeachable.

Thus, even if all forensic examiners operated under ideal "scientific" circumstances -- solid techniques performed by qualified professionals, conducted in an accredited laboratory with meaningful supervision and controls -- their reports would still be subject to the same dangers that prompted the Framers to adopt the Confrontation Clause in the first place. This is because, at bottom, the evidentiary worth of forensic evidence cannot be

boiled down to a simple mathematical calculus. Instead, the probative value of forensic evidence always depends on a variety of factors, including the training and skill of the forensic examiner, the validity and reliability of the technique, the precision of the recording methods, the existence of supervisory controls, and the absence of context and confirmation bias undermining the accuracy and objectivity of the forensic examiner in reporting the results.

These sorts of factors are, on a fundamental level, no different than the problems that can affect the reliability of other types of testimony. All witnesses, including state forensic examiners, can make mistakes, shade their testimony in favor of the sponsoring party, and even fabricate things that never occurred. As the Framers recognized, these dangers are at their greatest when evidence is prepared by the state with an eye toward a criminal trial, as forensic examiner reports inevitably are, and as the reports in these case in fact were. The Confrontation Clause exists precisely to mitigate and combat these sorts of dangers.

B. The Myth Exposed: The NYPD Crime Lab Scandal

One recent example from New York illustrates the potential dangers inherent in the notion that the reports of forensic chemists testing for the presence of narcotics -- like those admitted without the confrontation opportunity here -- involve merely the ministerial reporting of a "well-recognized" scientific test result.[4] In 2002, a chemist at the New York City

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[4] A full discussion of this incident in the New York laboratory can be found at Office of the Inspector General,

Police Department (NYPD) Controlled Substances Analysis Section stated during a staff meeting that "half the lab" cut corners when asked to determine the presence of narcotics. In response, lab supervisors administered an integrity test to three suspected chemists. The startling results revealed that two of the chemists fabricated findings in reports, claiming the presence of cocaine in packages which in fact contained innocuous white powder. Despite the fact that the NYPD documented "drylabbing" (the unethical practice of issuing a report of experimental findings without bothering to conduct the necessary experiment) by chemists routinely handling drug testing for the criminal justice system, no attempt was made to determine the extent to which actual casework was compromised. Nor was the misconduct reported by the lab's management outside of the Department, as required, to the Laboratory Accreditation Board of the American Society of Crime Laboratory Directors (ASCLD/LAB) and to the New York Commission on Forensic Science. Upon learning of the misconduct and cover-up several years later, the New York State Inspector General launched an investigation that led to a number of troubling findings.

Among these findings in the 2007 report, the Inspector General discovered that examiners failed to adequately investigate allegations of lab irregularities in a timely manner. Specifically, the Inspector General found that examiners allowed

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State of New York, *Investigation of Drug Test Irregularities at the NYPD Forensic Laboratory in 2002* (Dec. 2007), http://www.ig.state.ny.us/pdfs/Investigation%20of%20Drug%20Test%20Irregularities%20at%20the%20NYPD%20Forensic%20Laboratory%20in%202002.pdf.

analysts who had failed proficiency tests to continue casework, in violation of the lab's own internal rules. The lab's required report to accrediting bodies omitted any mention of the irregularities. Moreover, the Inspector General also found that the lab could not provide complete assurances that no incorrect test results were issued by the analysts in actual casework.

In short, the Inspector General found serious, systemic deficiencies of practice and judgment within the controlled substance analysis unit of one of the largest government forensic laboratories in the country.

C. DNA Exonerations and Systemic Reviews Have Revealed Widespread Problems with Forensic Evidence that Only Confrontation Can Mitigate

As we demonstrate below, problems such as those exposed at the NYPD crime lab are merely illustrative of the many widespread failures of forensic evidence throughout the country. While these failures have long been well-recognized, their pervasive nature has recently been confirmed by the more than 200 DNA exonerations that have occurred in the past decade. In fact, of these 200-plus DNA exonerations, more than half involved forensic errors in the original trial -- errors that ranged from simple mistakes to exaggeration and overreaching, to the reliance on faulty pseudo-science, to outright fabrication.[5] In turn, these errors have prompted systemic reviews, which have established that

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[5] *See, e.g., Innocence Project, Factors on Post-Conviction DNA Exonerations*, http://innocenceproject.org/Content/351.php.

problems with forensic practices in state laboratories extend well beyond the DNA exoneration context.

Against this backdrop, it is critical that this Court preserve the most important protection provided to us by the Framers for ferreting out mistakes, overreaching, bias and falsehoods contained in testimonial evidence gathered by state officials in connection with a criminal prosecution -- the requirement that the accused have the opportunity to subject such evidence to the rigors of confrontation. While confrontation alone will not always prevent or expose faulty forensic evidence, it remains the best mechanism yet devised for doing so. Preserving the traditional opportunity of the accused to be confronted with the testimony contained in state forensic laboratory reports -- testimony to which factfinders often accord the greatest weight -- is vital to deterring and exposing bad forensic evidence, and thus ensuring that the confrontation right continues to serve the historic role envisioned by the Framers.

ARGUMENT

The trials of the wrongly convicted have revealed widespread problems with forensic evidence, ranging from simple mistakes, to the exaggeration of forensic results by state examiners, to the uncritical reliance by state examiners on forensic procedures that had never stood up to real scientific scrutiny, to some instances of outright fabrication. In many ways, this is unsurprising. No forensic laboratory or discipline has been entirely shielded from error.

Indeed, the FBI forensic laboratory, considered the pre-eminent crime lab in the country, has been repeatedly criticized for scientifically flawed

procedures and overstated testimony.[6] The Inspector General released two reports on procedural problems at the FBI lab, with one report in 1997 documenting misconduct in the explosives unit[7] and another report in 2004 detailing flawed procedures and falsified testimony by a technician in the DNA unit even after the lab had become accredited.[8] In 2002, the FBI forensic lab asked the National Academy of Sciences to conduct an independent review of its comparative bullet lead analysis. The resulting investigation by the Academy's National Research Council called into question 30 years of FBI testimony on bullet evidence in criminal cases. Their report found that the FBI's methodology for interpreting results was deeply flawed and that courtroom testimony claiming bullet fragments could be matched to a particular box of ammunition was so overstated that it was misleading under the rules of evidence.[9]

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[6] *See* Paul C. Giannelli, *Wrongful Convictions and Forensic Science: The Need to Regulate Crime Labs*, Social Science Research Network 195 (Jan. 2008), *available at* http://ssrn.com/abstract=1083735.

[7] U.S. Department of Justice, Office of the Inspector General, *The FBI Laboratory: An Investigation into Laboratory Practices and Alleged Misconduct in Explosives-Related and Other Cases* (Apr. 1997), *available at* http://www.usdoj.gov/oig/special/9704a/.

[8] Office of the Inspector General, U.S. Department of Justice, *The FBI DNA Laboratory: A Review of Protocol and Practice Vulnerabilities* (May 2004), *available at* http://www.usdoj.gov/oig/special/0405/final.pdf.

[9] The Washington Post, 60 Minutes, & Innocence Project Joint Investigation, *Evidence of Injustice, FBI's Bullet Lead Analysis Used Flawed Science To Convict Hundreds Of Defendants* (Nov. 18, 2007), *available at* http://www.cbsnews.com/stories/2007/11/16/60minutes/main3512453.shtml. The FBI and the Innocence Project are now engaged

The fact that even the FBI could routinely present such flawed forensic evidence for such a lengthy period demonstrates the danger in a rule that would routinely shield the reports of state forensic examiners from the crucible of adversary testing set forth in *Crawford*. Those risks are real, as the wrongful conviction cases and the resulting systemic reviews demonstrate.

A. The Trials of the Wrongly Convicted Reveal a Widespread Pattern of Forensic Errors

The trials of the wrongly convicted reveal a widespread pattern of forensic errors. Although some of these errors involve forensic practices that have given way to new testing methods, there is no reason to believe these errors are purely or even largely a function of technology. As the Framers recognized more than 200 years ago when they included the Confrontation Clause in the Bill of Rights, simple mistakes and even more culpable ones are likely to continue regardless of how much technological progress occurs. Indeed, in the sections below, we provide several examples in which mistakes in the presentation of even DNA evidence have generated a wrongful conviction. As those cases show, technological advances cannot eliminate the forensic errors that have plagued the exoneration cases, and these errors highlight the need for the sort of vigorous confrontation right this Court has described in its *Crawford* line of cases.

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in a co-operative effort to notify prosecutors and defendants about unreliable analyst testimony going back to 1972.

1. Pre-DNA Serology Evidence – Chronic Mistakes and Overreaching

Before the advent of DNA technology, serology evidence was widely used in rape and homicide cases. Although by contemporary DNA standards, conventional serology is not terribly discriminating, in the pre-DNA era, serologists conducted blood grouping tests which could either exclude a suspect as the source of blood, semen or saliva left at a crime scene or include the suspect in a subset of the population that could have deposited the biological evidence. When used to include a suspect in the donor population, the size of the donor population became the key issue.[10] Regrettably, the exoneration cases contain many instances of forensic examiners who, in laboratory reports or through their trial testimony, understated the size of the donor population and thus overstated the probative value of the evidence.[11]

Most often examiners claimed the perpetrator was part of some relatively small subset of the population that included the defendant, when in fact no part of the population could be excluded on the basis of serology.[12] In those cases, despite the fact

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[10] *See* Brandon L. Garrett, *Judging Innocence*, 108 Colum. L. Rev. 55, 81-85 (2008); National Research Council, DNA Technology in Forensic Science 158 (1992).

[11] Garrett, *Judging Innocence,* 108 Colum. L. Rev. at 81-82 (discussing role of bad serology evidence in wrongful conviction cases).

[12] This occurred in 35 of the exoneration trials reviewed in connection with a forthcoming article on the trials of the wrongly convicted. See Brandon L. Garrett and Peter J. Neufeld, Improper Forensic Science and Wrongful Convictions, 95 Va. L. Rev. __ (forthcoming 2009), copy on file with the authors ("Garrett and Neufeld").

that the serology test results had no probative value, the examiners incorrectly reported that the testing was inculpatory. In still additional cases, the serology *excluded* the defendant, but analysts falsely asserted that the results were non-probative or could somehow nevertheless include the defendant.[13]

What these examples have in common is that in each, the analyst misled the factfinder by misstating the probative value of the evidence. In some cases the evidence was less inculpatory than represented but in most of the cases, evidence that was either neutral or exculpatory was misrepresented as inculpatory. Confrontation can be used to address precisely these sorts of problems: flagging and locking in limitations in the testing not otherwise acknowledged by the examiner, exposing any over-statements by the examiner concerning the probative value of serological evidence, and highlighting any exculpatory results omitted from the report or direct testimony. In short, confrontation can be a vital antidote to the problems illustrated by the serology cases.

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[13] In the Garrett & Neufeld article, this type of false assertion is documented in six post-conviction DNA exonerations. For instance, in the case of exoneree Jerry Watkins in 1986, the serology revealed that type B blood group substances were present in the vaginal swab although neither the victim nor Watkins possessed a B blood group substance. Nevertheless, the examiner asserted that Mr. Watkins was not excluded by simply making up an explanation for the presence of the B. DNA testing exonerated Mr. Watkins in 2000. *Watkins v. Miller*, 92 F. Supp. 2d 824 (S.D. Ind. 2000); *see generally* Innocence Project, *Know The Cases, Jerry Watkins*, available at http://www.innocenceproject.org/Content/286.php.

2. Hair Comparison Analysis – Bad Science and Overreaching.

Another danger revealed by the exoneration cases is that simply labeling certain evidence "scientific" can induce fact-finders to overlook the unreliability of the technique, the examiner, or both. This sort of assumption has been a recurrent problem in the exoneration cases involving the microscopic comparison of hairs. Over fifty of the DNA exoneration cases involved such analysis, in which an examiner, using a microscope, compared hairs found at the crime scene with the Defendant's hair and then provided the factfinder with a misleading conclusion concerning the probative value of the comparison.[14]

In a criminal trial, the probative value of this comparison should be quite limited. As the FBI noted in its 1984 Handbook, microscopic hair examination is "[n]ot positive evidence."[15] No adequate empirical data exist regarding the frequency of microscopic characteristics of human hairs and, consequently, the field has adopted standards that the strongest statement of association that can be made by an analyst is that the hairs in question are "consistent" with the defendant's or "could have" come from the defendant.[16] But the term "consistent" does not provide a sense of how rare or common the consistency is. Nonetheless, many analysts went far

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[14] Garrett & Neufeld, (statistics based on full review of trial transcripts in exoneration cases).

[15] Federal Bureau of Investigation, Handbook of Forensic Sciences 37 (March 1984).

[16] Proceedings of the International Symposium on Forensic Hair Comparisons, 107-110 (1985).

beyond this limitation, stating in reports and testimony that a crime scene hair was "highly likely" or "very probably" to have come, or did come, from the defendant.[17] Analysts also simply fabricated numerical proababilities where none existed.[18] Use of unsupported probability, frequency, or other individualizing statements is contrary to science and highly misleading. Yet, the trials of the wrongly convicted reveal it to be disturbingly common. Confrontation can prove a critical tool both in exposing the limited probative value of such pseudo-scientific techniques generally, and in deterring and exposing exaggerated claims about the meaning of such forensic testing in particular.

3. Drylabbing – A Chronic Failing Coins a Term For Forensic Fabrication.

Another problem uncovered by the DNA exonerations involved complete fabrication of forensic results.[19] The problem has even been given a name -- "drylabbing" -- which occurs when the state examiner

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[17] Garrett & Neufeld; *Montana v. Jimmy Ray Bromgard,* (on file with authors).

[18] In the trial of Jimmy Ray Bromgard, for example, the examiner testified that he had determined that head and pubic hairs found on the victim's bedding was "indistinguishable" from Mr. Bromgard's hair samples and there was only a one in ten thousand chance that the hairs came from anyone other than Mr. Bromgard, despite the fact that there was no database. Garret & Neufeld; Trial Transcript at 231, *available at* http://www.innocenceproject.org/docs/Bromgard_Melnikoff_Testimony.pdf.

[19] *See* Paul C. Giannelli, *The Abuse of Scientific Evidence in Criminal Cases: The Need for Independent Crime Laboratories,* 4 Va. J. Soc. Pol'y & L. 439 (Winter 1997).

"reports" results of tests that were never in fact conducted. This was the problem discussed above in connection with the NYPD Controlled Substances Analysis Division -- but it was in no way limited to that division.

Drylabbing was also documented in the investigation into the Houston crime laboratory that arose in the wake of exonerations there,[20] and in the investigation that followed an exoneration in West Virginia.[21] Drylabbing in drug cases has also been documented in San Francisco, where a crime lab technician certified evidence as illicit narcotics without performing the required chemical tests.[22] In Dallas, Texas, police arrested 39 Hispanic immigrants on the basis of evidence that was

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[20] *See* Michael R. Bromwich, *Third Report of the Independent Investigator for the Houston Police Department Crime Laboratory and Property Room* at 31-36 (June 30, 2005), http://www.hpdlabinvestigation.org/reports/050630report.pdf; *see* Michael R. Bromwich, *Fifth Report of the Independent Investigator for the Houston Police Department Crime Laboratory and Property Room*, 66-67 (May 11, 2006), http://www.hpdlabinvestigation.org/reports/060511report.pdf. (documenting "pervasive and serious problems with the quality of scientific work performed by the serologists, as well as with the presentation of the results obtained"); *see also* Roma Khanna & Steve McVicker, *Fingers Pointed at HPD Crime Lab in Death Row Case*, Houston Chronicle, Apr. 24, 2003, at A1.

[21] *See In re Investigation of W. Va. State Police Crime Lab,* 438 S.E.2d 501, 511-13 (W. Va. 1993).

[22] *See* Jim Herron Zamora, *Lab Scandal Jeopardizes Integrity of S.F. Justice: Sting Uncovered Bogus Certification,* San Francisco Examiner, Sept. 16, 1994, at A7.

allegedly "field-tested" and found to be cocaine, but actually consisted of wallboard gypsum.[23]

The fact that these sorts of forensic practices exist stands as a glaring example of the sort of failing that confrontation is designed to prevent and expose; examiners who realize there is a possibility their work -- or lack thereof -- will be subjected to adversarial scrutiny can be expected to think twice before making up results and tests from scratch.

4. Individual Examples of Forensic Errors Infecting the Wrongful Conviction Cases

A closer look at selected individual exoneration cases illustrates how the forensic mistakes, overreaching and bias outlined in the preceding sections directly led to wrongful convictions.

The prosecution of exoneree Earl Washington, for example, highlights some of the problems with serology evidence.[24] In Mr. Washington's case, the victim was a Caucasian woman who stated before she died that her attacker was African-American. A forensic report by state examiners found that stains on a central piece of evidence, a blue blanket on the murdered victim's bed, contained a fairly uncommon

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[23] *See* Mark Harrison, *Dallas Police Frame and Deport Hispanics*, November Coalition (Spring 2002) available at http://www.november.org/razorwire/rzold/27/page03.html

[24] Mr. Washington was exonerated in 2000 by DNA testing ordered by then-Governor James Gilmore. Governor Gilmore gave Mr. Washington a full and unconditional pardon for the murder. For more information about Mr. Washington's case, *see* http://www.innocenceproject.org/Content/282.php. *See also* Trial transcript available at www.innocenceproject.org/docs/Earl_Washington.pdf

plasma protein, "Tf CD."[25] This protein was virtually unheard of in Caucasians but found somewhat more frequently in the blood of African-Americans (approximately 10% of the population) -- which meant that it had been left by the attacker and not the victim. Initial laboratory reports flatly recognized this point, but after Mr. Washington became a suspect, and after it was determined that he did not possess the unusual "Tf CD" characteristic, forensic examiners prepared a new report stating instead that "[t]he results of Tf typing were inconclusive."[26]

Microscopic hair comparison testimony played a critical role in the capital murder trial of Ronald Williamson in Oklahoma. A state forensic examiner had concluded that two hairs found in the victim's apartment were consistent with Williamson's scalp hairs and two hairs found on the victim's bed were consistent with Williamson's pubic hairs.[27] Based in large part on this testimony, a jury convicted Mr. Williamson of capital murder. After an Oklahoma federal court overturned the conviction on habeas review, DNA testing exonerated Williamson and incriminated the prosecution's star witness -- precisely the opposite of the prosecution-friendly

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[25] Certificate of Analysis, Virginia Bureau of Forensic Science, August 19, 1982, available at www.innocenceproject.org/docs/Earl_Washington.pdf. at 5.

[26] See May 23, 1983 test results and Amended Copy of Certificate of Analysis dated August 19, 1982, August 26, 1983, available at [26] Certificate of Analysis, Virginia Bureau of Forensic Science, August 19, 1982, available at www.innocenceproject.org/docs/Earl_Washington.pdf. at 13-14.

[27] *Williamson v. Oklahoma*, 812 P.2d 384, 399, 404 (Okla. Crim. App. 1991).

conclusions definitively reached by the state forensic examiner.[28]

The case of Gilbert Alejandro, wrongly convicted of aggravated sexual assault in Texas, provides a classic example of drylabbing. There, the state forensic examiner claimed a DNA match even though neither he nor anyone else had completed any DNA testing at the time of the trial.[29] Final DNA testing, completed after Mr. Alejandro had served four years in prison, excluded Alejandro as the culprit.[30]

The case of Jeremiah Sutton[31] also confirms that problems with forensic evidence have persisted into the DNA era. Mr. Sutton's conviction rested almost entirely on the basis of DNA tests performed by the Houston Police Crime Laboratory, which had been summarized in an official report. The report failed to include information contained in the raw data and the analyst's bench notes, which in fact excluded Sutton as the culprit. Instead, the report erroneously concluded that the DNA profile found at the crime scene was consistent with a mixture from Sutton, the victim and another man. The report then compounded the error by making a series of incorrect

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28 *See 2 Men Go Free -- Thanks to DNA Evidence*, Orlando Sentinel, Apr. 16, 1999, at A16.

29 Brandon L. Garrett, *Judging Innocence*, 108 Columbia L. Rev. at 84.

30 Innocence Project, *Know the Cases: Gilbert Alejandro*, http://www.innocenceproject.org/Content/47.php.

31 Roma Khanna & Steve McVicker, *New DNA Test Casts Doubt on Man's Rape Conviction*, Houston Chronicle (Mar. 10, 2003), *available at* http://www.truthinjustice.org/sutton.htm. For a complete profile of the Sutton case, *see* http://www.innocenceproject.org/Content/268.php.

probability assertions about the frequency with which these purported events could occur.[32] In short, the DNA laboratory report in Mr. Sutton's case contained many errors not apparent from the face of the report, and all of which overstated the strength of the evidence implicating Mr. Sutton in the offense.

These are just some of the many exoneration cases that illustrate how forensic laboratory errors and overreaching plagued the criminal justice process during the past 35 years. Given that such mistakes, omissions and overreaching are precisely the sorts of errors confrontation is designed to deter and expose, exempting forensic evidence from the rigors of confrontation would only exacerbate these problems.

B. Systemic Reviews Triggered By The DNA Exonerations Have Confirmed Pervasive Forensic Errors and Misleading Forensic Reports

DNA exonerations are possible only in a small subset of cases -- those in which DNA testing can identify the source of biological evidence left by a rapist, which is usually dispositive of guilt in cases involving stranger-perpetrators where identity is the central issue. Once it became clear that a substantial number of forensic errors were occurring in this small subset of cases, many state and local jurisdictions around the country began systemic reviews of their own forensic practices and laboratories to determine whether the problem was more widespread. These reviews have revealed that the problems of erroneous

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[32]Brandon L. Garrett, *Judging Innocence*, 108 Colum. L. Rev. at 84, n.109.

forensic reports and testimony extend well beyond the exoneration context.

Boston, Massachusetts: The case currently before the Court arises out of an incident in Boston, which was investigated by the Boston Police Department (BPD). The forensic work of the BPD has itself been the subject of scrutiny in the wake of the DNA exoneration of Stephan Cowans. At Mr. Cowans' trial, two BPD Fingerprint examiners misidentified a crucial fingerprint. After the exoneration, Boston Police Commissioner Kathleen M. O'Toole ordered an audit of the fingerprint unit. An independent auditor issued a "blistering critique" of the unit, following which, Commissioner O'Toole immediately shut it down.[33] A later investigation by journalists uncovered information suggesting that the BPD fingerprint unit had been a "dumping ground" for misfit officers for decades.[34] The Massachusetts State Police (one of only sixteen state agencies nationwide that at the time remained uncertified) took over Boston's fingerprinting lab in an effort to upgrade the quality of work.[35] It is unclear whether this actually solved the problem, as the Massachusetts State Police Crime Labs have themselves been the subject of substantial criticism,

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[33] Suzanne Smalley, *Police Shutter Print Unit: Identification Error, Critical Report Cited*, Boston Globe, October 14, 2004, at B1. Ralph Ranalli, *Reilly Won't Charge Two Police Anaylsts*, Boston Globe, June 24, 2004, at B1.

[34] Maggie Mulvihill & Franci Richardson, *Misfits Dumped into Cop ID Unit*, Boston Herald, May 6, 2004.

[35] Suzanne Smalley, *State Police to Process Boston Prints, Scathing Review Prompts Shift*, Boston Globe, Oct. 16, 2004, at B3.

based on mishandling of evidence and other substandard practices.[36]

Montana: The DNA exoneration of Jimmy Ray Bromgard revealed that the founder and Director of the Montana State Crime Laboratory had made up a non-existent database and then fabricated statistics and probabilities to mislead the prosecutor and jury into according much more weight to the hair evidence then was either valid or appropriate. Mr. Bromgard's DNA exoneration prompted the creation of an independent review panel, which concluded that the examiner's work contained faulty and invented statistical analysis. Further investigation revealed that he had fabricated statistical evidence in two other cases. Post conviction DNA testing in those two cases resulted in two more exonerations. [37] Before his shoddy work was exposed in Montana, the same forensic analyst moved to Washington to conduct drug analysis work, similar to the drug analysis work before the Court here.[38] When his past became known, an internal review by the state of Washington

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[36] Jonathan Saltzman & John R. Ellement, *Crime Lab Mishandled DNA Results, State Police Suspend Aide, Ask For FBI Audit*, Boston Globe, Jan, 13, 2007; Jose Martinez, *Bay State Crime Labs in Dire Straits, Report: State Crime Labs Underfunded, Overworked*, Boston Herald, Apr. 15, 2002, at 1.

[37] *See* Innocence Project, *PEER REVIEW REPORT: Montana* v. *Jimmy Ray Bromgard*, *available at* http://www.innocenceproject.org/docs/bromgard_print_version1.html; Adam Liptak, *2 States to Review Lab Work of Expert Who Erred On ID*, N.Y. Times, Dec. 19, 2002 at A24.

[38] Ruth Teichroeb, *Counties to Be Told of Crime Lab Flaws*, Seattle Post-Intelligencer, Mar. 17, 2004, *available at* http://seattlepi.nwsource.com/local/165129_crimelab17.html.

of his drug analysis work revealed additional methodology problems. The reviewer described the forensic work as "sloppy" and "built around speed and shortcuts."[39]

Houston, Texas: A series of DNA exonerations triggered a full-scale review of the Houston Police Department Crime Laboratory. The results of that review were troubling, uncovering a "massive number of very serious analytical and reporting problems" in serology cases and major errors in DNA and controlled substances cases.[40] The review of over 1,000 serology cases processed by the Crime Lab during the 1980s and early 1990s found that the lab committed errors in virtually every serology case and exhibited a "nearly ubiquitous failure to apply and to properly interpret critical controls."[41] The report also documented serious analytical and interpretive failings in the DNA unit, ultimately concluding that the Lab produced "highly questionable" results rife with inaccurate and misleading statistics.[42] Among the types of problems found were an untrained staff that used shoddy forensic practices, including poor calibration and maintenance of equipment, improper record keeping, a lack of safeguards against contamination, and a leaky roof which flooded boxes of biological evidence.[43] In addition, several

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[39] *Id.*

[40] Michael R. Bromwich, *Final Report of the Independent Investigator for the Houston Police Department Crime Laboratory and Property Room* at 36, 4-5 (June 13, 2007),

[41] *Id.* at 37.

[42] *Id.* at 5.

[43] *Quality Assurance Audit of Houston Police Dep't Crime Laboratory – DNA/Serology Section* (Dec. 12-13, 2002),

instances of "drylabbing" – that is, the fabrication of results – were documented in the controlled substances division.[44]

Despite these serious methodological problems, however, the Crime Lab continued to perform DNA work for a decade "under conditions that made the risk of an injustice intolerably high."[45] According to one Texas state senator, "the validity of almost any case that has relied upon evidence produced by the lab is questionable."[46]

West Virginia: After the DNA exoneration of Glen Dale Woodall, the Prosecuting Attorney for Kanawha County requested a judicial investigation into the work of the serology department at the West Virginia Department of Public Safety; a separate investigation was also conducted by the American Society of Crime Laboratory Directors (ASCLD).[47] Both the West Virginia Supreme Court and ASCLD found that the serologist involved in the Woodall case routinely overstated results, provided misleading statements about his results, failed to report exculpatory results, failed to follow-up on conflicting results, and reported scientifically impossible or

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available *at* http://www.pdsdc.org/resources/dna/QA_Audit_for_DNA_databasing_labs.pdf.

[44] *See* Michael R. Bromwich, *Third Report of the Independent Investigator for the Houston Police Department Crime Laboratory and Property Room* at 31-36 (June 30, 2005), http://www.hpdlabinvestigation.org/reports/050630report.pdf.

[45] *Id.* at 5.

[46] Rodney Ellis, Editorial, *Want Tough on Crime? Start by Fixing HPD Lab*, Houston Chronicle, Sept. 5, 2004.

[47] *See In re Investigation of W. Va. State Police Crime Lab*, 438 S.E.2d 501, 503 (W. Va. 1993).

improbable results. They also found evidence that the serologist's supervisors ignored or concealed complaints about his work. Both concluded that laboratory operating procedures -- which, among other things, did not require written documentation of methodology, lacked auditing requirements, lacked written protocols, and failed to follow accepted scientific protocols -- "undoubtedly contributed to an environment within which [the serologist's] misconduct escaped detection."[48]

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These are just some of the jurisdictions in which exonerations have prompted systemic reviews of forensic practices. Audits of forensic laboratories in California, Colorado, Illinois, Virginia, Vermont, Texas, Michigan, Rhode Island, and Washington have revealed similar problems.[49] The pervasive nature of these errors illustrates the dangers of any rule premised on the notion that the inherent reliability of forensic evidence somehow renders unnecessary the added burden on law enforcement entailed by the right to confrontation as described by this Court in *Crawford*. Indeed, at a time when the American Bar Association has issued a set of reform principles to govern the use of forensic evidence,[50] and Congress

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[48] *Id.* at 504.

[49] Craig M. Cooley, *Forensic Science and Capital Punishment Reform*, 17 Geo. Mason U. Civ. Rts. L.J. 299, 317-18 (Spring 2007).

[50] Andrew E. Taslitz, *Convicting the Guilty, Acquitting the Innocent: The ABA Takes a Stand*, Crim. Just., at 27 (Winter 2005).

has tasked the National Academy of Sciences with examining ways to improve the quality of forensic practices,[51] it would be regrettable if this Court were to cut back on the most important protection against errors and flaws in the evidence gathered by the State for use in a criminal prosecution. Indeed, the Court's approval of a regime in which state forensic evidence is exempted from the crucible of adversary testing would undermine reform efforts by substantially reducing the likelihood that sub-standard forensic practices would be eventually exposed in the courtroom.

C. The Confrontation Guarantee Provides a Vital Safeguard For Exposing, During The Criminal Trial Itself, The Sorts Of Widespread Forensic Errors Revealed By The DNA Exonerations And Their Aftermath

By demonstrating the propensity of state forensic evidence for mistakes, and the susceptibility of that evidence to bias and fabrication, the DNA exonerations and resulting systemic reviews highlight the importance of preserving the ancient procedural safeguard of confrontation that the Framers included in the Bill of Rights. Confrontation

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51 *See Identifying the Needs of the Forensic Sciences Community,* http://www8.nationalacademies.org/cp/projectview.aspx?key=48741. That Committee asked Peter Neufeld, Co-Director of the Innocence Project, and Professor Brandon Garrett of the University of Virginia to examine, for the first time, the incidence of improper forensic science testimony in trials of persons exonerated by post-conviction DNA testing. Many of those results appear in this brief.

is the best mechanism yet devised for safeguarding against precisely the sorts of witness mistakes, overreaching, bias and outright fabrication exposed by the exonerations and their aftermath. Indeed, these are precisely the sorts of errors most likely to occur when, as often occurred during the *Ohio v. Roberts*[52] era, the state's testimonial evidence is shielded from the opportunity for adversarial scrutiny. *E.g.*, *Pointer v. Texas*, 380 U.S. 400, 404 (1965) (importance of confrontation in exposing falsehood); *Delaware v. Van Arsdall*, 475 U.S. 673, 682-83 (1986) (importance of confrontation in exposing bias); *see generally Crawford v. Washington*, 541 U.S. 36, 61-62 (2004) (describing confrontation as "procedural" guarantee that reflects Framers' substantive judgment about "how reliability can best be determined.").

The confrontation right described in *Crawford* can play a vital role in deterring and exposing the sorts of errors described in the previous sections. Affording such a right provides the defense with strong incentives to identify and correct simple mistakes in examiner conclusions, to push back against testimony that overstates the probative value of the results, and to probe and explore conclusions to ensure they have some grounding in validated procedures actually performed in connection with the case. The possibility that this will occur in any given case also provides significant incentives for forensic examiners to be careful and conservative in their practices and testimony.

It is also important to recognize that when vigorous confrontation dismantles misapplied or

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[52] 448 U.S. 56 (1980).

erroneous forensic evidence -- as it can -- the resulting acquittal often escapes further notice. Thus, there are undoubtedly many more examples of how confrontation can effectively police poor forensic work than appear in the reported decisions.

Nonetheless, examples exist. The cross-examination of a police chemist in a Baltimore County, Maryland case provides a textbook illustration of how confrontation in the forensic context can prevent or expose the sort of bad forensic work discussed above.[53] On cross-examination in a murder case brought by the State of Maryland against Robert Bedford, the chemist there acknowledged in a pre-trial hearing that "she did not understand the science behind many of the tests that she performed," and "she did not perform a number of standard tests on the blood samples in the case."[54] She also "agreed that other tests she had completed were useless" and "acknowledged that she had failed to record the results of some testing steps needed to ensure accuracy in blood typing."[55] Finally, she acknowledged at the conclusion of cross that, "as a result of all this" "there [wa]s not one finding, one

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[53] Indeed, the chemist discussed above also tested blood evidence in DNA-exoneree Bernard Webster's case and provided testimony in that case. Stephanie Hanes, *Chemist Quit Crime Lab Job After Hearing, Papers Show; She Acknowledged Report Was Worthless In 1987,* Balt. Sun, Mar. 19, 2003, at B1. After the exoneration, scientist Edward T. Blake reviewed the chemist's explanations about blood typing "within the definition of material perjury." *Id.* In response, the Baltimore County Police Department began reviewing all 480 cases in which the chemist had performed or supervised serological tests. *Id.*

[54] *Id.*

[55] *Id.*

result in this report that [wa]s usable" and that her "entire report . . . [her] entire analysis [wa]s absolutely worthless."[56] As a result of this confrontation at the pre-trial hearing, the prosecutors decided not to call the forensic examiner at trial. When asked why by reporters, the prosecutor responded: "Have you read the transcripts? Well, there you go."[57]

Cross-examination had similarly beneficial results in *Ragland v. Kentucky*, 191 S.W.3d 569, 581 (Ky. 2006), where an FBI bullet lead composition analyst was caught in a lie by defense counsel on cross-examination, confronted with her earlier statements, and eventually forced to admit that her prior statements were false. Later, the analyst admitted, "[i]t was *only after the cross-examination at trial* that I knew I had to address the consequences of my actions." *Id.* (emphasis added).

It would be a mistake, however, to say that confrontation is a *foolproof* method of ferreting out these errors. Regrettably, many of the exoneration cases were ones in which the adversarial system, including actual confrontation of the state forensic examiner, failed to elicit the truth -- that the defendant was in fact innocent of the charged offense.

Even though confrontation cannot prevent every wrongful conviction in which forensic testimony is presented, however, it still has performed a critical role in minimizing such errors and helping to rectify them when they do occur. Many of the errors discussed above would never have been discernable

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[56] *Id.*

[57] *Id.*

from state forensic examiner reports alone. In fact, in many of these cases, it was confrontation that allowed those conducting post-conviction review to ascertain both that an error was likely made and, after DNA established that a wrongful conviction had occurred, what the causes of that error were. In other words, while confrontation did not prevent a wrongful conviction in the cases discussed above, in many cases it hastened the DNA exoneration by flagging the case as one where error was likely.

For example, in the case of Hector Gonzalez, who was wrongly convicted of a murder in Brooklyn, the forensic examiner testified on direct examination that blood stains found on a pair of Mr. Gonzalez' jeans were "consistent with the victim's blood type" but failed to reveal what percentage of the population shared that blood type.[58] Only on cross-examination did the forensic examiner acknowledge that the genetic markers she was relying on for her direct examination testimony were found in 54% of the New York city population.[59]

Likewise, in the case of Dwayne Allen Dail, who spent 18 years in a North Carolina prison for a rape he did not commit, the forensic examiner was simply asked on direct examination whether she had found semen on the vaginal smears and the panties.[60] She

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58 Innocence Project, *Know the Cases*, Hector Gonzalez, http://www.innocenceproject.org/Content/155.php.

59 Trial transcript, available at www.innocenceproject.org/docs/GonzalezShenoudaTestimony.pdf.

60 Innocence Project, Know the Cases, Dwayne Allen Dail, http://www.innocenceproject.org/Content/832.php. Trial transcript available at www.innocenceproject.org/docs/Dail.pdf.

responded in the affirmative. Cross-examination, however, made clear that the semen had not been matched to Mr. Dail -- although the examiner stated simply that the sample could not "implicate or eliminate" Mr. Dail as a suspect. The record created by confrontation has accordingly helped to more easily identify where the forensic examiners went wrong, thereby assisting in securing the later DNA exoneration.

Of course, the point is to do even better -- the goal of Confrontation is to produce the correct result at trial by "beat[ing] and bolt[ing] out the Truth," *Crawford*, 541 U.S. at 62 (internal citation and quotation omitted). Good forensic practices have nothing to fear in such a system. Not only will such procedures and methods withstand even the most vigorous cross-examination, but the accused will often choose to forego confrontation entirely, rather than drive home in front of the fact-finder the accuracy and reliability of the scientific evidence against him. By contrast, bad forensic practices and pseudo-science have plenty to fear, as a re-invigorated opportunity for confrontation can only increase the likelihood that mistakes, overreaching and bias will be exposed at trial. In short, while no procedural mechanism could ever ferret out every bad practice and erroneous test result, applying the confrontation guarantee as described in *Crawford* to reports of state forensic examiners prepared in anticipation of a criminal prosecution will go a long way towards enhancing the truth-seeking function. As *Crawford* recognized, this is precisely what the Framers envisioned. *Crawford*, 541 U.S. at 61.

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The pervasive errors discussed above expose the folly of any argument that an opportunity to confront forensic testimony is a burdensome luxury for our criminal justice system. Time away from the laboratory and transportation to the courthouse are not the only costs implicated. As the DNA exonerations have shown, there are also real costs to a suspension of confrontation, including increased wrongful convictions, attendant civil suits, loss of public trust, and, in some cases, the failure to apprehend the true perpetrator. These costs were the ones that most concerned the Framers when they adopted the confrontation guarantee. As the Framers recognized, when it comes to the presentation of evidence compiled by law enforcement with an eye toward prosecution, a procedural mechanism that "beats and bolts out the truth" is a necessity no true system of justice can do without -- even when it comes to evidence labeled "scientific" by state officials.

CONCLUSION

For the foregoing reasons, the decision of the Appeals Court of Massachusetts should be reversed.

Respectfully submitted,

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